

REMARKS

Claims 1-9 are pending in the application, with claims 1 and 7 having been amended to further recite that the inner structural layer is without anti-fouling material. Support for the claim amendments can be found in paragraph 30 of the specification. Claim 1 has been further amended to recite that the inner and the outer layers are formed as a unitary *rotational* plastics moulding. Support for the claim amendment can be found in, *inter alia*, paragraph 29 of the specification. No new matter has been added. Reconsideration of the claims is respectfully requested in view of the foregoing amendments and the following remarks.

Rejections for claims 7 and 8: 35 U.S.C. §103(a)

Claims 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Taquino (US 6,695,540). Applicants respectfully traverse this rejection.

Claim 7, from which claim 8 is dependent, recites a method of manufacturing a vortex induced vibration suppression cladding section for mounting upon an elongate underwater member. The method comprises rotationally moulding an outer layer of plastics material incorporating anti-fouling material, and subsequently rotationally moulding an inner structural layer comprising plastics material without anti-fouling material within the outer layer, so that the two layers form a unitary moulding.

While acknowledging that Taquino fails to disclose molding a plastic inner layer within an outer layer, the Office argues that “[t]he use of rotational molding of polymeric materials to form tubular structure is a well known and established process in the art.” Therefore, according to the Office, “[t]he disclosure by Taquino that said cladding section is produced using a molding process encompasses rotational molding and all other established molding process.” See page 6, lines 1-5 of the Office Action.

Applicants respectfully disagree. Taquino merely discloses the general method of moulding for polymeric materials. The natural inference from Taquino is that the process would be carried out by injection molding, the most economical and quickest process for mass production of single layer parts. In contrast thereto, claim 7 is specifically limited to *rotationally moulding* an outer layer of plastics material incorporating anti-fouling material, with an inner structural layer comprising plastics material without anti-fouling material.

The Office also argued that the use of a plastic molded member having inner and outer layers instead of a single layer is an obvious multiplication of parts for the purpose of providing said plastic molded member with increased strength (lines 1-4, page 3), but here is no reason to believe that a double layered structure would be stronger than a single layered structure of similar thickness, particularly if they would be formed as a unitary molding. The present invention as defined by claim 7 is advantageous in that it provides a double layered structure with an outer layer of an anti-fouling material, which is relatively heavy and expensive, and an inner layer which is free of such anti-fouling material (paragraph 29). The outer layer can be made thin so as to reduce the weight and expense of the device. The invention is thus contrived to produce a cladding for suppressing vortex induced vibration which is economical in manufacturing, and at the same time, is adapted to reducing the weight and frontal area of the device by way of utilizing the claimed double layered structure (paragraph 7).

Therefore, for at least these reasons, claim 7 and dependent claim 8 thereon are submitted to be patentable over Taquino.

Rejections for claim 9: 35 U.S.C. §103(a)

Claim 9 was rejected under 35 U.S.C. §103(a) as being obvious over Taquino in view of Blair et al. (US 6,019,549). Applicants respectfully traverse the rejection.

In addition to the limitations on claim 7, from which claim 9 depends, claim 9 further recites at least one hollow protruding feature for suppressing vortex induced vibration.

Taquino cannot be combined with Blair to render claim 9 obvious since the application of Blair to Taquino fails to remedy the deficiencies of Taquino discussed above with respect to claim 7. Moreover, application of the Blair teachings would make the device of Taquino inoperable as intended. Taquino's vane section 18 includes a plurality of longitudinally extending, spaced apart openings 27 which are aligned with a corresponding plurality of openings 28 (Fig. 2 and lines 17-20, col. 4). These openings 27, 28 are used to secure a bond of the body 11 to a pipeline through a plurality of bolted connections 40 (lines 31-37, col. 4). Introducing the hollow protruding feature of Blair to the vane sections 18, 19 would result in the collapse of the vane sections which would compromise their ability to operate as vortex induced vibration suppression strakes.

Therefore, in addition to the same reason articulated above in response to the claim 7 rejection, claim 9 is submitted to be patentable over Taquino in view of Blair.

Rejections for claims 1, 2, 5 and 6: 35 U.S.C. §103(a)

Claims 1, 2, 5, and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Taquino in view of Inoue (US 5,423,631). Applicants respectfully traverse these rejections.

First, there is no valid reason to combine Taquino with Inoue. The Office argues that it would have been obvious to a person skilled in the art to apply the anti-fouling material of Inoue to the structure of Taquino. Figs. 1 and 2 of Inoue depict an anti-fouling copper alloy layer 1 which is bonded on the inner wall of a water intake pipe 5. Inoue's anti-fouling material layer 1 is bonded to the inner wall of water intake pipe 5 (lines 35-47, Col 2). The water intake pipe 5 is formed of iron, and is rigid in its nature. A person skilled in the art would not have conceived of applying Inoue's anti-fouling structure which is applicable to a rigid wall to Taquino's vortex induced vibration suppression device which is a flexible polymer.

Furthermore, even if there were a valid reason to combine Taquino with Inoue, such combination would not result in the structure of claim 1. As Applicants already pointed out in the Remarks dated June 25, 2008, Inoue contemplates sheets of anti-fouling material which are composed of the copper alloy layer 1, insulating material layer 2, and the wall of water intake pipe 5 (See, lines 17-30, page 5 of the Remarks). This process clearly would not result in a *unitary rotational plastics moulding*.

Thus, claim 1 and dependent claims 2, 5, and 6 of the present application recites subject matter that is not disclosed in or suggested by Taquino in view of Inoue.

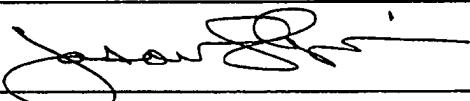
Rejections for claims 3 and 4: 35 U.S.C. §103(a)

Claims 3 and 4 were rejected under 35 U.S.C. §103(a) as being unpatentable over Taquino in view of Inoue, and further in view of Blair et al. Applicants respectfully traverse the rejection of claims 3 and 4, which depend from claim 1, for the same reason articulated above in response to the claim 1 rejection and since Blair fails to remedy the deficiencies of Taquino. In addition, such application would make Taquino's device inoperable as discussed above in relation to claim 9. Thus, claims 3 and 4 are submitted to be patentable over Taquino in view of Inoue, and further in view of Blair et al.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections, and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

RESPECTFULLY SUBMITTED,					
<i>NAME AND REG. NUMBER</i>	Jason M. Shapiro Registration No.: 35,354				
<i>SIGNATURE</i>				<i>DATE</i>	February 3, 2009
<i>Address</i>	ROTHWELL, FIGG, ERNST & MANBECK Suite 800, 1425 K Street, N.W.				
<i>City</i>	Washington	<i>State</i>	D.C.	<i>Zip Code</i>	20005
<i>Country</i>	U.S.A.	<i>Telephone</i>	202-783-6040	<i>Fax</i>	202-783-6031